REMARKS

Reconsideration of this application under the provisions of Section 116 is respectfully requested. By this proposed amendment, it is proposed to amend certain claims as set forth above to overcome the Examiner's rejections and more concisely claim and describe the present invention. Claims 1-15 remain in the application for reconsideration by the Examiner. The Examiner's allowance of all pending claims is earnestly solicited.

Claims 1-15 stand rejected under Section 103(a) as unpatentable over Bonomi (6,219,352) in view of Knuth, "The Art of Computing 2nd Edition."

To further distinguish the invention over the art of record, the Applicants have revised the first paragraph of independent claim 1 to, "forming a physical address queue comprising a circularly linked list further comprising a plurality of destination node entries each node entry having an associated address for receiving multicast data." Support for this change can be found in the application in the paragraph beginning at line 1 of page 7.

Bonomi discloses a technique for saving memory space (for example, see column 6, lines 1-5) by maintaining "only one copy of each multicast cell," instead of copying a multicast cell several times for each output branch. A Bonomi cell comprises multicast data. His linked list indicates whether a particular data cell is to be transmitted to a particular output branch. That is, each cell is stored in only one physical queue and the cells are retrieved for transmission to an output branch as determined by a logical output branch queue.

The logical output branch queue comprises the head pointers HP1 and HP 2 (each representing an output branch or cell destination) in Figure 5. Reference characters 510 and 520 each identify a physical queue, wherein contents of queue locations 510A-510L link or point to another location within the queue 510, and contents of the corresponding location 520A-520L indicate a memory location where a multicast data cell is stored. The head pointer HP1, representing an output branch or cell destination, traverses the memory locations 510A-510L according to the linking information stored at each location 510A-510L. As can be seen in Figure 5, the location 510A links to location 510C, which links to 510D, etc.

When the head pointer reaches a location 510A-510L in the linking queue 510, the corresponding storage location 520A-520L identifies the memory location of the data cell for sending to location address HP1. Contents of the corresponding location in a mask 530A-530L indicate whether the stored cell is to be transmitted to HP1, that is, if it has not been previously sent to output branch HP1.

For example, when the output branch pointer HP1 points to queue location 510A, the data cell stored at a location indicated by the contents of 520A is sent to the output branch indicated by HP1 if contents of the mask location 530A indicate that the data cell is yet to be sent to output branch HP1. Thus the contents of the locations 530A-530L serve a control function to indicate those cells that are to be sent to a specific output branch. See Bonomi's discussion of the elements of Figure 5 set forth beginning in column 12, line 64.

Note that at column 13, line 26 Bonomi refers to the logical queue defined by the head pointers HP1 and HP2. Bonomi further discloses a "separate [logical] queue for each branch [output HP1 or HP2] of the multicast connection so that each branch can be served according to the specific service parameters it is set up with." See column 3, lines 53-56.

Knuth adds the concept of a circularly linked list to Bonomi, if the combination is in accordance with the rules for reference combinations.

In contrast to Bonomi's logical queue, the Applicants claim "a physical address queue comprising a circularly linked list further comprising a plurality of destination node entries each node entry having an associated address for receiving multicast data." Bonomi does not disclose a physical address. Instead, his receiving addresses for the multicast data are determined by the indexing head pointers, which represent a logical queue.

Note further that Bonomi's physical queue 510 is merely a list of linking information for indicating the next entry for the head pointer. His physical queue 520 stores memory locations for the data cells to be transmitted, and his physical queue 530 operates as a mask or control function for indicating whether a data cell is to be sent to the location indicated by the indexing head pointer. Since the Applicants now claim "a physical address queue comprising a circularly linked list further comprising a plurality of destination node entries each node entry having an associated address for receiving multicast data" and such structural elements are absent from Bonomi, amended claim 1 is believed to be allowable over Bonomi.

Each one of the dependent claims 2-13 further distinguishes the invention as each defines a novel combination of additional features. It is therefore respectfully submitted that dependent claims 2 -13 depending from amended claim 1 are allowable over the cited art.

As can be seen from the marked-up version above, rejected independent claim 14 has been amended in a manner similar to the amendment to claim 1 to further distinguish it from the art of record. Thus the remarks above supporting the Applicant's contention that claim 1 is patentably distinct from the combination of Bonomi and Knuth also apply to the Applicant's contention that claim 14 is patentably distinct from the cited art.

Independent claim 15 has been revised as set forth above and is believed to be allowable over the cited art for the same reasons that amended claims 1 and 14 are believed to be allowable over the cited art.

Since it is believed that the foregoing amendments overcome the rejection of claims 1-15 under Section 103, the entry of this amendment under Section 103 is deemed appropriate.

If a telephone conference will assist in clarifying or expediting this Proposed Amendment under Section 116, the Examiner is invited to contact the undersigned directly at the telephone number below. The undersigned proposes to telephone Examiner Neurauter to discuss the merits of the proposed amendments prior to issuance of the Examiner's response.

Respectfully submitted,

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